MAGIC SQUARES A LA FIBONACCI

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For years people have been fascinated with magic squares as well as the Fibonacci sequence of numbers. Put the two together, and you have an especially intriguing mathematical pastime.

In a "regular" magic square, the sum of each row, column, and diagonal is the same number. Consider a regular, 3 by 3 magic square that uses the counting numbers 1-9:

8	1	6
3	5	7
4	9	2

The Fibonacci sequence is 1, 1, 2, 3, 5, 8, 13, 21 ... where each term is the sum of the preceding two terms. Take any sequence of nine Fibonaccis and pair them up with the magic square counting numbers 1-9. The square below uses the Fibonacci terms 2, 3, 5, 8, 13, 21, 34, 55, 89:

55	2	21
5	13	34
8	89	3

A new magic square is formed, but not with the usual properties. In a Fibonacci magic square, the sum of the products of each row is equal to the sum of the products of each column. (Isn't that pretty??)

Try the same procedure with a different sequence of nine Fibonaccis. In fact, why not try it with your own sequence, created a la Fibonacci (example: 3, 3, 5, 9, 15, 24 ...)?